

Bell Work

23.Oct.2017

Please log onto a computer and make your way to the class:

Webpage → Labs → “Intro to Energy and Light RXTE”

While you are logging on try to explain what “light” is.

What are use of light other than “seeing?”

EQ:

Is radiation bad for you or just misunderstood, why?

Objective: You will be able to identify various forms of light energy and the symbols for frequency, wavelength, speed of light, planks constant, and energy in a mathematical expression.

RXTE

Do all of the reading before answering questions.

Complete on a separate sheet of paper appropriately titled; “RXTE”.



The screenshot shows the homepage of the Rossi X-ray Timing Explorer Learning Center. At the top, there is a NASA logo and the text "National Aeronautics and Space Administration" and "Goddard Space Flight Center". A search bar is located in the top right corner. Below the header, a large banner features a view of Earth from space and the title "The Rossi X-ray Timing Explorer Learning Center". A sidebar on the left contains a navigation menu with links: Home, About RXTE, Who is Bruno Rossi?, The RXTE Story, Shedding a New Light on the Universe (highlighted), RXTE Discoveries, Images & Videos, For Educators, Take a Journey of Discovery with RXTE™, Tour the ASM Sky, and Other Resources. The main content area has a heading "Welcome to the Rossi X-ray Timing Explorer Learning Center!" followed by an "Overview" section. The overview text describes RXTE as a satellite that observes high-energy objects like black holes and neutron stars. To the right of the text is an image of the RXTE satellite. Below the overview, there is a paragraph about the timing of observations and a section titled "About Our Site" which mentions the website's history and a link to meet the team. The footer contains the NASA logo, the Goddard Space Flight Center logo, contact information for Phil Newman and Maggie Maselli, and links to the Privacy Policy and Contact Us.

NASA National Aeronautics and Space Administration
Goddard Space Flight Center

Search the RXTE site GO
Flight Projects | Sciences and Exploration

The Rossi X-ray Timing Explorer Learning Center

Home
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Who is Bruno Rossi?
The RXTE Story
Shedding a New Light on the Universe
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Welcome to the Rossi X-ray Timing Explorer Learning Center!

Overview

The Rossi X-ray Timing Explorer (RXTE) is a satellite that observes the fast-moving, high-energy worlds of black holes, neutron stars, X-ray pulsars and bursts of X-rays that light up the sky and then disappear forever.

How fast and how energetic are they? Well, some pulsars spin faster than a thousand times a second. And a neutron star produces a gravitational pull so powerful that a marshmallow striking the star's surface would hit with the force of a thousand hydrogen bombs. Astronomers study changes that happen from microseconds to months in cosmic objects to learn about how gravity works near black holes, how pulsars in binary systems are affected by mass transferring from one star to the other, and how the giant engines in distant galaxies are powered. RXTE was launched into low-Earth orbit on December 30, 1995. It spent over 16 years making unique contributions to our understanding of these extreme objects.

For RXTE, the trick to observing these kinds of objects is all in the timing – an ability to observe changes in X-ray brightness that occur in a mere thousandths of a second, or over several years.

Learn more about how this one-of-a-kind satellite has reshaped our understanding of what goes on in the most violent and bizarre regions of the Universe.

About Our Site

RXTE Learning Center was begun in the summer of 1995 and several teacher interns contributed content from 1997-1999. (See also: [Meet the RXTE Learning Center Team](#)) We are pleased to present an updated website in 2011.

NASA Official: Phil Newman
Web Curator: Maggie Maselli
Page Last Updated: 8-Dec-2011

Privacy Policy & Important Notices
Contact Us

Home work

23.Oct

- Cereal/ cracker box
- Old CD or DVD (they will be broken into pieces)
- Continue with Science Fair

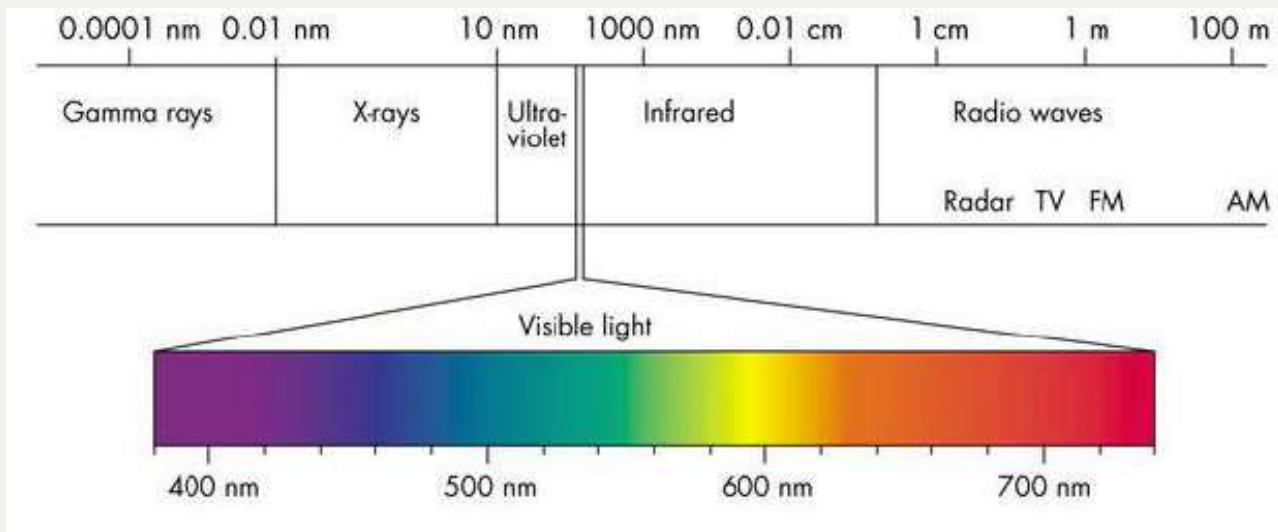
Bell Work

24-Oct-2017

A: We have trouble seeing light at 325nm, what is the wave length in meters (use your green sheets)?

B: What region is the light in?

C. If the speed of light, c , is $3 \times 10^8 \text{ms}^{-1}$, what is the frequency, ν , of the light ($\lambda = 325 \text{nm}$)?



Objective

You will construct and then understand how to use a CD box/ paper SPECTROscope and decode the line spectrum it reveals.

EQ:

Is radiation bad for you or just misunderstood, why?

The Light Spectrum

